



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,198	08/30/2006	Dieter Groezinger	1032/0108PUS1	7398
60601 7590 10/09/2009 Muncy, Geissler, Olds & Lowe, PLLC P.O. BOX 1364 FAIRFAX, VA 22038-1364				
EXAMINER LIN, KUANG Y				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
10/09/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/591,198  
Filing Date: August 30, 2006  
Appellant(s): GROEZINGER, DIETER

---

Martin R. Geissler  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed August 21, 2009 appealing from the Office action mailed April 6, 2009.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

1,196,096	BELYAKOV ET AL.	12-1985
2,878,539	HALPERN ET AL.	3-1959

3,764,575	ANDERKO ET AL.	10-1973
5,573,055	MELLING ET AL.	11-1996

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over SU 1,196,096 and further in view of US 2,878,539 to Halpern et al.

SU '096 substantially shows the invention as claimed except that it does not disclose to apply compact pressure and use graphite parting agent in the foundry process. However, it is conventional to use a compact molding machine or pressure blowing machine for pressuring the foundry mixture during core making process. Thus, it would have been obvious to use a compact molding machine or pressure blowing machine for forming core of SU '096 in view of the conventional practice. Further, Halpern et al. show (see, col. 2, lines 28-35) that it is conventional to incorporate graphite as parting agent in the mold mixture to facilitate the foundry process. The purpose of adding parting agent to the foundry mix is to prevent molding material sticking to the casting and thus facilitate the removal of mold and core from the cast product. It would have been obvious to incorporate graphite in the mold mixture of SU '096 in view of the advantage.

2. Claims 1, 2 and 4-7 are also rejected under 35 U.S.C. 103(a) as being unpatentable over US 3,764,575 to Anderko et al. and further in view of US 5,573,055 to Melling et al. and US 2,878,539 to Halpern et al.

Anderko substantially shows the invention as claimed except that it use resin, instead of phosphate, as a binder and does not disclose the use of graphite parting agent. However, Melling shows to use phosphate and/or borate as a binder to avoid the use of any organic materials which would volatize or burn out when the mold is heated at high temperatures (see, for example, col. 4, lines 4-7). It would have been obvious to use the phosphate and borate binder of Melling in the water soluble salt core of Anderko in view of the advantage. Further, Halpern et al. show (see, col. 2, lines 28-35) that it is conventional to incorporate graphite as parting agent in the mold mixture to facilitate the foundry process. The purpose of adding parting agent to the foundry mix is to prevent molding material sticking to the casting and thus facilitate the removal of mold and core from the cast product. It would have been obvious to incorporate graphite in the mold mixture of Anderko et al. in view of the advantage.

#### **(10) Response to Argument**

Appellant in page 4, second paragraph and page 5, third paragraph of the appeal brief stated that Halpern discloses a sand-based core with a resin binder and indicates that graphite may be added to this sand-and-resin system. Appellant further stated that there is no reason to add graphite to the salt and phosphate composition of SU 1,196,096 or Anderko as modified with Melling

because graphite is used in the sand and resin composition of Halpern. However, in Harpern the purpose of adding parting agent, such as graphite, to the foundry mix is to reduce or prevent interaction between the molten metal and the surface of the mold and core, and thus to prevent the molding material from sticking to the cast product and thereby to facilitate the removal of mold and core from the cast product. Further, since the interaction between the molten metal and the surface of mold and core is reduced or prevent, a cast product with a smooth surface may be obtain. Thus, it would have been obvious to adapt the concept of adding parting agent to foundry mix, as taught by Halpern, in any casting system, such as the water-soluble core of SU '196 or Anderko as modified with Melling, to facilitate the foundry process.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Kuang Y. Lin/  
Primary Examiner, Art Unit 1793

Conferees:

Jessica Ward

/Jessica L. Ward/

Supervisory Patent Examiner, Art Unit 1793

Roy King

/Roy King/

Supervisory Patent Examiner, Art Unit 1793